

REMARKS

Because the Examiner did not enter the Amendment filed on February 21, 2008, claims 1-7 are pending in the subject application. Applicants have canceled claim 5 without disclaimer or prejudice, amended claims 1 and 4, and added new claims 10-12. The amendments to claim 1 are supported in the specification of the published application (Publication No. 2006/0111536 A1) at paragraphs [0013], [0014], [0019], and [0024]. The amendments to claim 4 are merely editorial changes necessitated by the amendments to claim 1. New claims 10, 11, and 12 are supported in the specification at paragraphs [0061], [0030] and [0046], respectively. Thus, no new matter is introduced by these amendments and new claims, and applicants respectfully request that this Amendment be entered into the application. Upon entry of this Amendment, claims 1-4, 6, 7 and 10-12 will be pending.

Applicants respond below to the rejections set forth in the November 21, 2007 Final Office Action, taking into account the Examiner's comments in the March 17, 2008 Advisory Action.

Rejection of Claims 1-3 and 5-7 under 35 U.S.C. §103(a)

The Examiner rejected claims 1-3 and 5-7 under 35 U.S.C. §103(a) as allegedly obvious over U.S. Patent No. 4,184,004 to Pines et al. (henceforth "Pines") in view of U.S. Patent No. 5,539,013 to Eckberg et al. ("Eckberg").

Applicants respectfully traverse this rejection. Claim 5 has been canceled, rendering the rejection thereof moot. However, applicants address below the rejection of claim 5 to the extent the subject matter of this claim has been incorporated into claim 1. Applicants note that independent claim 1, as amended, and claims 2, 3, 4 and 6 dependent therefrom, recite an organic polymer having (a) a main skeleton comprising a saturated hydrocarbon polymer, an oxyalkylene polymer or a vinyl polymer, and (b) epoxy-containing silicon groups at its ends.

Due to the presence at its ends of the epoxy-containing silicon groups, which serve as curable points, the claimed organic polymer can be cured, whereby the resulting cured product retains the characteristics of the main chain skeleton of the polymer. See the specification at paragraph [0120]. In the case of the saturated hydrocarbon polymer, the main chain skeleton may impart to the cured product the characteristics of excellent heat resistance, low moisture permeability, low moisture absorption, and low gas permeability. See the specification at paragraph [0123]. In the case of the oxyalkylene polymer, the cured product may exhibit excellent low-temperature characteristics, flexibility, and compatibility

with other components. See paragraph [0124]. In the case of the vinyl polymer, the cured product may exhibit excellent weather resistance, flexibility, and compatibility with other components. See paragraph [0125].

Applicants note that Pines differs from the claimed invention at least in two ways. First, Pines does not disclose an organic polymer having a main skeleton comprising a saturated hydrocarbon polymer, an oxyalkylene polymer or a vinyl polymer because the polymer taught by Pines merely has a main chain skeleton of an organosilicone. Second, Pines does not disclose an organic polymer with epoxy-containing silicon groups at its ends.

Eckberg discloses a polymer having a silicone main chain skeleton and epoxy-containing siloxane groups at both ends. See, e.g., the Experimental section. Thus, Eckberg differs from the instant claims at least in not disclosing an organic polymer having a main skeleton comprising a saturated hydrocarbon polymer, an oxyalkylene polymer or a vinyl polymer. Further, in Eckberg, the incorporation of the polyether block (polyoxyalkylene) into the silicone backbone greatly increases the flexibility and elastomeric properties of the polymer as compared to those of a silicone of similar molecular weight without the polyether block. See col.11, lines 4-8. That is, the properties of the polyoxyalkylene polymer disclosed in Eckberg are derived mainly from the silicone backbone, with additional properties imparted by the polyether block. In contrast, the properties of the polymer claimed in the present invention are derived from the organic polymer backbone, and its silicone groups are used as curable points.

Applicants note that to reject a claim as obvious, the Examiner must articulate, *inter alia*, the following:

(1) a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference;

(2) ...

(3) a finding that one of ordinary skill in the art would have recognized that the results of the combination were predictable; and

(4) ...

The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art.

See M.P.E.P. §2143(A). Because the polymers disclosed by Pines and Eckberg have different main skeletons, and there are no teachings in the prior art that the main

skeletons disclosed by Pines and Eckberg are interchangeable, there is no reason or suggestion in the prior art to modify the polymer of Pines with the disclosures of Eckberg. Moreover, even if, *arguendo*, a person of ordinary skill in the art were to modify the polymer of Pines based on the disclosures of Eckberg, such combination would not arrive at the claimed organic polymer. Applicants maintain, as discussed above, that Pines and Eckberg, alone or in combination, do not teach an organic polymer having (a) a main skeleton comprising a saturated hydrocarbon polymer, an oxyalkylene polymer or a vinyl polymer, and (b) epoxy-containing silicon groups at its ends. That is, the cited references do not teach every element of the now pending claims. Further, applicants assert that there is no teaching in Eckberg that would suggest to a person skilled in the art that the polymer disclosed in Pines should be modified to predictably produce an organic polymer having (a) a main skeleton comprising a saturated hydrocarbon polymer, an oxyalkylene polymer or a vinyl polymer, and (b) epoxy-containing silicon groups at its ends, as claimed. Thus, for at least these reasons, applicants maintain that independent claim 1, and claims 2, 3 6, and 7 dependent therefrom, are not obvious over Pines in view of Eckberg. Withdrawal of this ground of rejection is therefore respectfully requested.

Rejection of Claim 4 under 35 U.S.C. §103(a)

The Examiner rejected claim 4 under 35 U.S.C. §103(a) as allegedly obvious over Pines in view of Eckberg as applied to claims 1-3 and 5-7 above, and further in view of U.S. Patent No. 4,803,244 to Umpleby ("Umpleby"). The Examiner stated that Umpleby teaches hydrosilation chemistry commonly used in the art to form polyolefinic/polysiloxane copolymers, and that it would have been obvious to a person of ordinary skill in the art to combine the teachings of Umpleby to those of Pines in order to produce polysiloxane/polyolefinic epoxide-containing copolymers, because the inclusion of a hydrophobic moiety would provide both a stain-resistant and hydrophilic copolymer.

Applicants respectfully traverse this rejection. Applicants note that the deficiencies of Pines in view of Eckberg discussed above also apply to claim 4. Applicants also note Umpleby discloses an unsaturated elastomer containing carbon-carbon double bonds. Although the polymer backbone is an organic polymer, the polymer cannot be cured by itself. Instead, the polymer of Umpleby can be cured by adding a multifunctional organosilicone compound containing Si-H and a hydrosilylating catalyst. Thus, due to the differences between the polymer of Umpleby and the polymers of Pines in view of Eckberg, applicants maintain that the person of ordinary skill in the art would not combine Umpleby with Pines and Eckberg to arrive at the now claimed invention. For at least this reason,

applicants maintain that claim 4 is not obvious over the combination of the cited art. Applicants therefore respectfully request that the present ground of rejection be withdrawn.

CONCLUSION

In view of the above remarks, applicants respectfully submit that all of the now pending claims are in condition for allowance, which action is earnestly solicited.

If a telephone interview would be of assistance in expediting prosecution of the subject application, the Examiner is invited to contact the undersigned at the number provided below. No fee, other than the \$1050.00 fee required for a three-month extension of time and the RCE filing fee of \$810.00, is deemed necessary in connection with the filing of this Amendment. However, in the event that the filing of this paper is deemed not timely, applicants petition for any additional extension of time necessary. Authorization is hereby given to charge the petition fee and any other fees that may be required in relation to this paper to Kenyon & Kenyon Deposit Account No. 11-0600.

Respectfully submitted,
KENYON & KENYON LLP

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